



2022

Annual Refresher

Presented by

County Technical Services, Inc.



Topics covered in this year's MSHA Refresher:

- 1. Living the Safety Culture by Assessing Risk**
- 2. Trenching**
- 3. Confined Space**
- 4. Memory Quiz of Past MSHA Topics**
- 5. CDL Drug-Alcohol Awareness**
- 6. Hazards Associated with Aerial Lifts**
- 7. Pit Update – Presented by County Supervisor**

Safety Alert

Recent Vehicle Rollover Accidents

Miners continue to die in rollover accidents.

Fatalities occurred when vehicles flipped over backwards, rolled over, and tipped over on their sides.

- Deceased miners were operating haul trucks, excavators, bulldozers, front end loaders, and service trucks while working or traveling near the edge of dump sites, elevated roadways, embankments, ponds, and excavations.

Numerous other serious injury and close call accidents occurred involving haul trucks, water trucks, excavators, motor graders and pickup trucks. Contributing factors included the non-use or unbuckling of seat belts; jumping from vehicles; brake failure; distracted driving; loss of vehicle control; traveling or working too close to unconsolidated roadways; inadequate berms; pushing through berms; and failure to perform workplace examinations.



This haul truck was dumping at the edge of an over-steepened stockpile. He was wearing a seat belt and suffered only minor injuries.



This water truck encountered a soft road shoulder, overturned and rolled down an embankment. The operator was wearing a seat belt and was uninjured.

Best Practices*

- **Examine and maintain the workplace:** dump sites, roadways, ramps and berms. Unload on level, stable ground behind the dump berm or block, well back from the edge or with spotter assistance.
- **Maintain control of the vehicle:** operate at safe speeds, especially on curves, and when turning or cornering; center the vehicle in the travel lane; avoid distractions.
- **Establish traffic rules:** post signage where necessary and ensure these rules are followed.
- **Maintain vehicles in good condition:** brakes; wheels and tires; steering/operating controls; lights; windows; and wipers.
- **Ensure that seat belts are maintained in good condition and worn at all times:** remain inside the cab; never attempt to jump clear; consider the use of four-point seat belt systems and new technology that provides early warning of tipping.

***Make sure miners and mine operators are trained in best practices.**

Report accidents and hazardous conditions: 1-800-746-1553

[msha.gov](https://www.msha.gov) | askmsha@dol.gov | [@MSHA_DOL](https://twitter.com/MSHA_DOL)



Name: _____

County: _____

Date: _____

Living the Safety Culture - Webinar Worksheet

1. According to Candace Carnahan, the first step in not getting hurt at work is:

2. CTSI Claims show the *leading* category of Worker's Compensation Claims in Road and Bridge operations is from:

- a. _____ Respiratory injury
- b. _____ Amputation
- c. _____ Slips/Trip/Fall and Body Mechanics
- d. _____ Cuts

3. A MSHA Fatalgram is discussed where the loader rolled over the operator when changing the rear tire. Name 2 precautions which could be done to prevent this type of accident:

4. An MSHA program which focused on frequently cited violations in Metal/Non-Metal Mining and resulted in highest accidents and deaths is called "Rules to Live By". Name 2 focused areas by MSHA in this program:

5. Describe 3 ways to Control Employee Risk and hazards on the job:



Name: _____

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MSHA Trenching-Excavation Webinar Worksheet

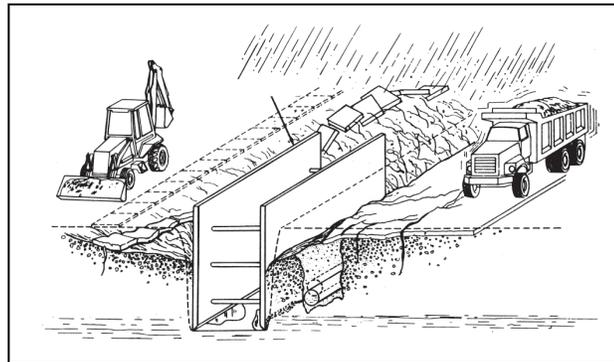
1. Besides soil collapse, name 2 other hazards of working in an excavation site:

a. _____ b. _____

2. In a trench a ladder, ramp, or stairs should be placed every _____ feet from work areas for exiting the trench.

3. A "Protective System" which can be used in Class A and B soils to protect workers from cave-ins by creating a series of horizontal levels or steps in the soil is called _____.

4. Describe 3 hazards to consider while working around this excavation:



5. Daily inspections of excavations are required by a " _____ Person". Other reasons which may require an inspection could be:

- a. _____ When hazardous atmospheres exist
- b. _____ After it has rained
- c. _____ When the protection system has failed
- d. _____ All of the above

DAILY TRENCHING LOG

DATE:	SIGNATURE:
WEATHER:	PROJECT:
Was One Call System contacted: Yes _____ No _____	
Protective system: Trench shield (box) _____ Wood shoring _____ Sloping _____ Other _____	
Purpose of trenching: Drainage _____ Water _____ Sewer _____ Gas _____ Other _____	
Were visual soil tests made: Yes _____ No _____ If yes, what type?	
Type of Soil: Stable Rock _____ Type A _____ Type B _____ Type C _____	
Surface encumbrances: Yes _____ No _____ If yes, what type?	
Water conditions: Wet _____ Dry _____ Submerged _____	
Hazardous atmosphere exists: Yes _____ No _____ <i>(If yes, follow confined space entry procedures policy; complete confined Space Entry Permit; monitor for toxic gas(es))</i>	
Is trenching or excavation exposed to public vehicular traffic (exhaust emission): Yes _____ No _____ <i>(If yes, refer to confined space entry procedures; complete Confined Space Entry Permit; monitor for toxic gas(es))</i>	
Measurements of trench: Depth _____ Length _____ Width _____	
Is ladder within 25 feet of all workers: Yes _____ No _____	
Is excavated material stored two feet or more from edge of excavation: Yes _____ No _____	
Are employees exposed to public vehicular traffic: Yes _____ No _____ <i>(If yes, warning vests required)</i>	
Are other utilities protected: Yes _____ No _____ <i>(Water, sewer, gas or other structures)</i>	
Are sewer or natural gas lines exposed: Yes _____ No _____	
Periodic Inspection: Yes _____ No _____	
Did employees receive training in excavating: Yes _____ No _____	
Corrective Actions and Remarks:	



Name: _____

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Confined Space Awareness - Webinar Worksheet

1. A "Confined Space" is defined by OSHA as a space which: (check one)
 - a. _____ Is large enough for a person to get in; has limited entry and exit; and not designed for human occupancy.
 - b. _____ Has limited entry and exit; has chemicals inside of it; has a door opening which is small
 - c. _____ Is not designed for human occupancy; is below ground; requires PPE to enter
 - d. _____ Is large enough for a person to enter; has lockout/tagout programs required; has "do not enter" signs posted
2. Name one safety precaution to take if you need to unclog a jammed hopper or bin on a crusher machine: _____
3. Cleaning the inside of a tank could be a dangerous confined space; describe 2 of the potential dangers of working inside a tank:

4. Describe 2 methods of "isolating a hazard" of a confined space:

5. When testing a confined space for the hazardous atmospheres which could be present, what is the correct order of testing: (check one)
 - a. _____ 1. Methane, 2. Sulfide, 3. PEL < 35 of Carbon Monoxide
 - b. _____ 1. Gas fumes, 2. Oxygen level, 3. Toxic Gas
 - c. _____ 1. Oxygen, 2. Combustibles, 3. Toxic Atmospheres
 - d. _____ 1. Oxygen, 2., LEL of toxic chemicals, 3. Carbon Monoxide

Name _____
County _____
Date _____



Accident Investigation

1. Name four *general* risk factors which can contribute to workplace accidents/injuries:
- 1 _____
 - 2 _____
 - 3 _____
 - 4 _____

Miners Rights

2. Rights which apply to all miners are: Protection against Discrimination, Participation in MSHA Inspections; Obtaining an MSHA Mine Inspection; Pay during Mine Withdrawals; Contesting Enforcement Actions; Getting Proper Safety & Health Training; Health Protection Rights; Being informed of, and participating in, standards and enforcement of the Act. T _____ F _____

Respirators

3. Name three hazardous conditions in county operations which *may* require a respirator:
- 1 _____ 2 _____
 - 3 _____
4. Name three issues which could affect the fit of a respirator: 1 _____
2 _____ 3 _____
5. An "N-95" Mask means:
- a. That when worn properly the mask filters out _____% of airborne particulates and
 - b. The mask _____ **will** OR _____ **will not** be resistant to oils in the atmosphere?

Bloodborne Pathogens

6. Name three routes that infected body fluids can enter your body: 1 _____
2 _____ 3 _____
7. If you are exposed to body fluids, you should:
- 1__ Flush mouth, nose, eyes for 15 minutes if mucus membranes exposed
 - 2__ Wash area immediately with hot water + antibacterial soap
 - 3__ Report the exposure immediately to supervisor
 - 4__ All the above



Ground Control / Haul Roads

8. Name 4 dangers of working near this highwall 
- 1 _____ 2 _____
 - 3 _____ 4 _____
9. MSHA advises that best practice for a Haul Road is that each lane be: _____ **times** the width of the widest vehicle or equipment or be designated as a _____ road.
10. MSHA requires that unsafe ground conditions in the pit be reported if not readily corrected. Describe two ways to protect others from a hazardous area in the pit if you are not able to immediately correct it?
- 1 _____
 - 2 _____



Name: _____

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MSHA CDL Drug and Alcohol Awareness Worksheet

1. The Federal Act which requires employers to have a policy prohibiting drug and alcohol use in the workplace and to encourage those who abuse to voluntarily seek help is called: _____

2. 49 CFR Part 382, of the Federal Motor Carrier Safety Administration, requires your employer to: (circle one)
 - a. Test the CDL holder for Controlled Substances and Alcohol
 - b. Not Permit the CDL to do their Safety Sensitive Duties if positive test
 - c. Randomly test 10% for Alcohol and 50% for Drugs (DOT and FTA only)
 - d. All the above

3. For the CDL holder to be able to return to duty after a positive alcohol test, the return to duty test result must be _____ % or less.

4. An Employee Assistance Program (EAP) will help an employee with resources if they have concerns of abuse of drugs or alcohol for themselves or family members. One of the key factors about conversations with an EAP is that all information will be kept: _____

5. Describe 3 observed patterns or types of behavior discussed, which *could* indicate alcohol or drug abuse in the workplace:



Name: _____

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Hazards With Aerial Lifts - Webinar Worksheet

1. You are the operator of an aerial lift and must perform a pre-use inspection. Name 3 key areas you will inspect on your equipment before using:

2. A worker is allowed to stand on a ladder or platform edge while in/on a lift bucket or platform lift to extend their working reach *only* when: (*circle one*)

- a. They are trained as a Competent Person
- b. They are in a harness with two contact points
- c. There is a spotter on the ground level below
- d. Not allowed under any circumstances

3. Modifications can be made to aerial lifts without manufacturer's approval only by an OSHA Trained Competent Person: _____ T _____ F

4. The distance a worker must stay away from overhead power lines when working on any lifts, ladders or in equipment which raises your working level from the ground is _____ feet at minimum.

5. Describe 3 precautions to take when moving an aerial lift:

Aerial Lift

Pre-Start & Workplace Inspection Form

AERIAL LIFT INFORMATION				
MAKE	MODEL	S/N		
LOCATION WHERE LIFT WILL BE USED:				
TYPE OF WORK:				
<i>Pre-Start Inspection</i>		<i>OK</i>	<i>NOT OK</i>	<i>N/A</i>
Operating Controls				
Emergency Controls				
Safety Devices				
Personal Protective Devices				
Pneumatic, Hydraulic and Fuel System (leaks)				
Cables				
Wiring harness				
Loose/missing parts				
Tires/Wheels				
Placards and Warnings				
Operational Manual				
Outriggers/Stabilizers				
Guardrail system and locking gate				
Additional Comments				
<i>Workplace Inspection</i>		<i>OK</i>	<i>NOT OK</i>	<i>N/A</i>
Drop-offs or holes				
Slopes				
Bumps and floor obstructions				
Debris				
Overhead obstructions and high voltage conductors				
Hazardous locations and atmospheres				
Tools and other equipment				
Inadequate surface and support to withstand all load forces imposed by the aerial lift platform				
Wind & Weather Conditions NOTE: Operation of aerial lifts outdoors is prohibited when wind speeds reach 28 mph, when there is a wind warning in effect of 28 mph or more, when lightening is visible, or when thunder storm warnings are in effect.				
Presence of unauthorized people				
Other possible unsafe conditions				
Additional Comments:				

Inspected By: _____

Date: _____